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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,796

12/29/2004

Hiroshi Kojima

DAIN:795

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ALEXANDRIA, VA 22320

EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

08/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,796	Applicant(s) KOJIMA, HIROSHI	
	Examiner Matthew D. Matzek	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment dated 5/21/2007 has been fully considered and entered into the Record. Previously active claim 2 has been incorporated into claim 1. Claim 2 has been canceled. Claims 9 and 10 are withdrawn and their status identifiers should reflect their current status. The previous anticipatory rejection in view of Kojima et al. has been withdrawn due to the incorporation of claim 2 into claim 1. The remaining obvious rejections made in view of Kojima et al. have also been withdrawn because the applied reference and the instant application were commonly assigned at the time of invention and the applied reference is only available under 102(e).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (EP 0 998 182 A2) in view of Hong et al. (EP 0 831 074 A2). The disclosure of Ueda et al. is silent as to the use of a Cu-Co alloy for the blackened, shielding layer.

a. Ueda et al. disclose an electromagnetic shield plate comprising a transparent substrate [0011], a conductive grid [0024] of metal particles [0018] and a metallic layer [0032] of copper [0033]. The metallic layer structure may comprise multiple layers and the uppermost is preferably blackened to suppress the reflection of visible light. When covering the grid with a metallic layer structure said layer structure should be further chromate plated. This provides the claimed density-intensifying layer formed on the blackened layer. The top of the electromagnetic shield plate may further comprise a

transparent conductive film that covers the plate. Examiner equates the conductive film to the claimed transparent resin layer. The film that coats the plate may absorb near-infrared radiation and visible light [0043-48]. Ueda et al. fail to teach the specific composition of the blackened metal layer.

b. Hong et al. teach the use of a ceramic composition for absorbing electromagnetic waves comprising a mixture of Cu and Co (abstract). The final powder has a particle size of 1 micron (Example 1).

c. Since Hong et al. and Ueda et al. are from the same field of endeavor (i.e. electromagnetic shielding materials), the purpose disclosed by Hong et al. would have been recognized in the pertinent art of Ueda et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the blackened layer of Ueda et al. with the alloy composition of Hong et al. The skilled artisan would have been motivated by the desire to create an article that absorbs more electromagnetic waves than previously possible (page 2, lines 33-35).

e. The transparent conductive film is formed over the conductive geometric pattern to cover the entire surface of the electromagnetic shield plate. This film layer serves to shield near-infrared radiation and provide surface resistance [0045]. The relative depth of transparent conductive film and number of layers are result-effective variables affecting the properties of the film [0045]. Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the depth of the resin layer, it would have been obvious to one of ordinary skill in the art to optimize this result-

effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

3. Claims 1 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (EP 0 998 182 A2) in view of Miyake (JP 62-107039). The disclosure of Ueda et al. is silent as to the use of a Cu-Co alloy for the blackened, shielding layer.

a. Ueda et al. disclose an electromagnetic shield plate comprising a transparent substrate [0011], a conductive grid [0024] of metal particles [0018] and a metallic layer [0032] of copper [0033]. The metallic layer structure may comprise multiple layers and the uppermost is preferably blackened to suppress the reflection of visible light. When covering the grid with a metallic layer structure said layer structure should be further chromate plated. This provides the claimed density-intensifying layer formed on the blackened layer. The top of the electromagnetic shield plate may further comprise a transparent conductive film that covers the plate. Examiner equates the conductive film to the claimed transparent resin layer. The film that coats the plate may absorb near-infrared radiation and visible light [0043-48]. Ueda et al. fail to teach the specific composition of the blackened metal layer.

b. The Japanese patent teaches the use of a Cu-Co alloy for use as an electromagnetic wave shielding material (claim 1).

c. Since Ueda et al. and Miyake are from the same field of endeavor (i.e. electromagnetic shielding materials), the purpose disclosed by the Miyake would have been recognized in the pertinent art of Ueda et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the blackened layer of Ueda et al. with the alloy composition of Miyake. The skilled artisan would have been motivated by the desire to create an article that has excellent corrosion resistance and high conductivity on a metal foil for an electromagnetic shield.

e. The transparent conductive film is formed over the conductive geometric pattern to cover the entire surface of the electromagnetic shield plate. This film layer serves to shield near-infrared radiation and provide surface resistance [0045]. The relative depth of transparent conductive film and number of layers are result-effective variables affecting the properties of the film [0045]. Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the depth of the resin layer, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (EP 0 998 182 A2) and Miyake (JP 62-107039) as applied to claim 1 above, and further in view of Kadokura et al. (US 5,158,657). The disclosure of Ueda et al. and Miyake are silent as to the size of the particle for use in the blackened layer.

a. Kadokura teaches the creation of a circuit substrate and process for its production comprising a conductive film layer **3** that is formed via electro-deposition. The conductive film layer is made conductive with a powder comprising Co and Cu with particle sizes preferably ranging from 0.05 to 1 micron (col. 5, lines 46-55).

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b. Since Ueda et al. and Kadokura are from the same field of endeavor (i.e. electromagnetic shielding materials), the purpose disclosed by Kadokura would have been recognized in the pertinent art of Ueda et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the blackened layer of Ueda et al. with the particle sizes taught by Kadokura. The skilled artisan would have been motivated to use particles of that specific size because smaller particles would cause secondary agglomeration and larger particles would cause a problem of sedimentation of particles (col. 5, lines 25-31).

Response to Arguments

5. Applicant's arguments with respect to claims 1 and 3-8 have been considered but are moot in view of the new ground(s) of rejection based upon the reference provided in the IDS filed after the Non-final Office Action dated 11/27/2006.

6. Applicant argues that the lack of unity requirement mailed 8/8/2006 is improper. Examiner has already addressed Applicant's arguments pertaining to the lack of unity requirement and closed the issue in the Non-final Office Action dated 11/27/2006.

Conclusion

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 5/30/2007 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

/M. D. M./

/Terrel Morris/
Terrel Morris
Supervisory Patent Examiner
Group Art Unit 1771